

ABSTRACT

A wireless network provides controlled wireless communications with multi-mode wireless WTRUs. The wireless network has at least one base station having a transceiver operating in an infrastructure communication mode with multi mode WTRUs and a controller that transmits control signals via infrastructure communications with a WTRU that control peer-to-peer mode communications of that WTRU with other WTRUs. A WTRU has transceiver components configured for selective operation in an infrastructure communication mode with a network base station and in a peer-to-peer communication mode with other WTRUs. The WTRU also has a transceiver controller configured to selectively control peer-to-peer mode communications with other WTRUs based on communication signals received in infrastructure communications with a network base station. Preferably, the transceiver controller is configured to control the transceiver components to switch between infrastructure communication mode and peer-to-peer communication mode based on Quality of Service criteria.